REFRIGERANTS—UNACCEPTABLE SUBSTITUTES—Continued

End-use	Substitute	Decision	Comments
CFC–12, R–502 Household Freezers (Retrofit and New Equipment/NIKs).	R–403B	Unacceptable	R–403B contains R–218, a PFC, which has an extremely high GWP and lifetime. Other substitutes exist which do not contain PFCs.
	R–405A	Unacceptable	R–405A contains R–c318, a PFC, which has an extremely high GWP and lifetime. Other substitutes exist which do not contain PFCs.
	Hydrocarbon Blend B	Unacceptable	Flammability is a serious concern. Data have not been submitted to demonstrate it can be used safely in this end-use.
CFC–12, R–500 Residential Dehumidifiers (Retrofit and New Equipment/NIKs).	R–405A	Unacceptable	R–405A contains R–c318, a PFC, which has an extremely high GWP and lifetime. Other substitutes exist which do not contain PFCs.
	Hydrocarbon Blend B	Unacceptable	Flammability is a serious concern. Data have not been submitted to demonstrate it can be used safely in this end-use.
CFC–12 Motor Vehicle Air Conditioners (Retrofit and New Equipment/NIKs).	R–405A	Unacceptable	R–405A contains R–c318, a PFC, which has an extremely high GWP and lifetime. Other substitutes exist which do not contain PFCs.
	Hydrocarbon Blend B	Unacceptable	Flammability is a serious concern. Data have not been submitted to demonstrate it can be used safely in this end-use.
	Flammable Substitutes.	Unacceptable	The risks associated with using flammable substitutes in this end-use have not been addressed by a risk assessment.

SOLVENT CLEANING SECTOR—ACCEPTABLE SUBJECT TO USE CONDITIONS SUBSTITUTES

Application	Substitute	Decision	Conditions	Comments
Electronics Cleaning w/ CFC–113, MCF.	HCFC–225 ca/cb	Acceptable	Subject to the company set exposure limit of 25 ppm of the -ca isomer.	HCFC–225 ca/cb blend is offered as a 45%-ca/55%-cb blend. The company set exposure limit of the -ca isomer is 25 ppm. The company set exposure limit of the -cb isomer is 250 ppm. It is the Agency's opinion that with the low emission cold cleaning and vapor degreasing equipment designed for this use, the 25 ppm limit of the HCFC–225 ca isomer can be met. The company is submitting further exposure monitoring data.
Precision Cleaning w/CFC–113, MCF.	HCFC–225 ca/cb	Acceptable	Subject to the company set exposure limit of 25 ppm of the -ca isomer.	HCFC–225 ca/cb blend is offered as a 45%-ca/55%-cb blend. The company set exposure limit of the -ca isomer is 25 ppm. The company set exposure limit of the -cb isomer is 250 ppm. It is the Agency's opinion that with the low emission cold cleaning and vapor degreasing equipment designed for this use, the 25 ppm limit of the HCFC–225 ca isomer can be met. The company is submitting further exposure monitoring data.